

## **REMARKS**

### **Claim status**

Claims 1-40 are pending. Claims 6, 10-13, 21, 25-28, 33, and 38-40 have been withdrawn.

Upon entry of this amendment, claims 1-5, 7-9, 14-20, 22-24, 29-32, and 34-37 will be under examination.

However, Applicants note that, similar to claims 10 and 25, which have been made of record as not covering the elected invention, claim 37 also does not cover the elected invention and should be withdrawn.

### **Obviousness Rejection**

Claims 1-5, 7-9, 14-20, 22-24, 29-32, and 34-37 stand rejected as obvious over U.S. patent 6,066,626 to Yew ("Yew") taken together with any one of commonly-owned U.S. patents 6,274,597 (the '597 patent); 6,589,964 (the '964 patent); 6,599,919 (the '919 patent); or 6,774,135 (the '135 patent). Claims 17 and 18 also were rejected in view of the foregoing further in view of Hendricks et al., *Blood*. 2000; 96: 845a ("Hendricks").

#### **The '964, '919, and '135 Patents Should be Removed As Prior Art Under 35 U.S.C. 103(c)**

In the previous Response dated October 20, 2005, Applicants attempted to remove the '597, '964, '919, and '135 patents as prior art against the claims of this application. According to MPEP 706.02(1)(1)-(3), subject matter which is available as prior art under §102(e) is disqualified as prior art under §103(a) against the claimed invention if that subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

However, the Examiner indicated that this statement was insufficiently clear to remove the rejection over the '964, and '919 patents, and pointed out that it inadvertently failed to reference the '135 patent. The Examiner also is requiring documentary evidence.

**Accordingly, Applicants state that the inventions disclosed and claimed in each of the '964, '919, and '135 patents were commonly owned at the time the present invention was made. The inventions remain commonly-owned along with the present invention.**

Submitted herewith is supporting documentation that the application under examination and each of the '964, '919, and '135 patents are currently owned by the same party, and were owned by the same party at the time the present invention was made. Attached at **Exhibit 1, Tabs A-C**, are copies of filing receipts and/or Notice of Recordation forms for the '919, '964, and 135 patents, showing that the owner of all of the patents was Mount Sinai School of Medicine of New York University as of September 7, 2001, June 14, 2002, and August 10, 2001, respectively. Also attached at **Tabs A-C** are copies of the issue fee transmittals, also showing that the owner of the patents was still Mount Sinai School of Medicine as of February 20, 2003, February 20, 2003, and March 8, 2004, respectively.

Attached at **Tab D** is a copy of the Application Data Sheet filed with the present application, as well as the application cover sheet filed with the corresponding provisional application, which names Mount Sinai School of Medicine as the assignee as of its February 17, 2004 filing date and provisional filing date of February 18, 2003. Ownership of all of the foregoing has not changed since those dates.

As such, Mount Sinai School of Medicine was the owner of each of the '964, '919, and '135 patents at least during the period spanning August 10, 2001 to the present. Thus, since Jian-Qiang Fan was employed by Mount Sinai as of November 24, 1998, and thus obligated to assign his inventions to Mount Sinai (see **Tab E**), it is clear that the present invention was made during a

period in which Mount Sinai School of Medicine owned each of the prior patents, and was the owner of present invention due to Dr. Fan's obligation to assign.

Since the present application was filed after November 29, 1999, when this rule went into effect, the '964, '919, and '135 patents are not prior art.

The Present Claims are Not Obvious Over the '597 Patent  
in Combination with Yew and/or Hendricks

In this Office Action, the Examiner maintains the obviousness rejection of claims 1-5, 7-9, 14-17, 19, 20, 22-24, 29-32, and 34-37 over Yew in combination with commonly-owned patent 6,274,597.<sup>1</sup> According to the Examiner, it would have been obvious to co-administer a vector containing a replacement gene and a chaperone from the combined teachings of the '597 patent and Yew, since one of ordinary skill in the art would have expected that a combination of an increase in a patient's endogenous mutant protein using a chaperone, and a replacement gene encoding the protein, would provide even more  $\alpha$ -galactosidase A activity than either method alone.

The Examiner also maintains his rejection over claims 17 and 18 as obvious over Yew and the '597 patent further in view of Hendricks. The Examiner contends that it would have been obvious from the combined teachings of Hendricks, Yew and the '597 patent to administer a recombinant  $\alpha$ -galactosidase A to a human via transfected mesenchymal cells for the purposes of increasing  $\alpha$ -galactosidase A levels. For purposes of responding, it is presumed that the Examiner intended to say that it would have been obvious to administer such cells to a human *in combination with a chaperone* as taught by the Fan patents, since that the subject matter of the present claims.

These rejections are respectfully traversed for the following reasons.

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<sup>1</sup> The '597 patent cannot be removed as prior art under 103(c) since it is not a 102(e) reference.

The '597 patent discloses a method for treating Fabry disease by administering a chaperone for  $\alpha$ -galactosidase A. The chaperone enhances activity of mutant and wild-type protein from patients or overexpressed from heterologous genes introduced into the genome of a transgenic mouse. Yew discloses a method of gene therapy by administering a vector containing a functional  $\alpha$ -galactosidase A (gene therapy). Claim 1 and dependent claims therefrom are directed to improving gene therapy by increasing expression of a recombinant protein expressed from a gene therapy vector (e.g., exogenously introduced  $\alpha$ -galactosidase A) *and not* to obtaining a synergistic increase of a patient's  $\alpha$ -galactosidase A activity by increasing the endogenous enzyme, as the Examiner alleges would have been obvious.

Thus, the Examiner has failed to provide the requisite motivation to combine the '597 patent and Yew references, but instead has stated a conclusion which is not even the subject matter of the present claims, since, as indicated above, claim 1 is directed to improving gene therapy by increasing expression of a recombinant protein which has been introduced into the cells, (i.e., *expressed from an exogenously administered vector*) and not to increasing activity of the endogenous protein. Claim 1 specifically requires increasing expression of a recombinant protein *previously introduced into the host by gene therapy*, and is not directed to an increase in the patient's own  $\alpha$ -Gal A by increasing levels of the patient's endogenous enzyme. The present invention provides methods for enhancing expression of a  $\alpha$ -Gal A protein encoded by a vector with a chaperone, which is not found in the cited art. The ability of a chaperone to enhance activity of a protein expressed by a gene therapy vector would provide a significant advantage for increasing efficacy of gene therapy and potentially render gene therapy effective. The Examiner has used impermissible hindsight reconstruction by applying the disclosure of the present application to the prior art to make the obviousness rejection.

In addition, the requisite motivation to combine the teachings of the '597 patent and Yew as applied to claim 29 et seq. also is not found in either the '597 patent nor Yew.

Claim 29 is directed to a method of improving treatment in an individual who has been administered a therapeutic vector comprising a gene encoding a protein by co-administration of a chaperone for the protein. In contrast, the '597 patent is directed to treating Fabry disease by administering a small molecule chaperone compound (including DGJ) which enhances the activity of an *endogenous*  $\alpha$ -galactosidase A. This is touted as a new *alternative* to gene replacement (see col. 1, lines 29-35 of the '597 patent), and thus teaches away from the claimed invention. The '597 patent also emphasizes the improvement of the chaperone strategy over other strategies by explicitly stating that new treatment strategies (i.e., treatments other than gene therapy or protein replacement therapy) are "urgently needed." This also teaches away from the claimed invention. Accordingly, the '597 patent does not provide any suggestion of improving gene therapy using chaperone therapy, but only suggests a method *in lieu* of gene therapy altogether. Thus, the '597 patent teaches away from the treatment method disclosed by Yew (gene therapy) by asserting to be an alternative over gene therapy.

The '597 patent does disclose experiments in which activity of normal  $\alpha$ -galactosidase A, *ex vivo*, in fibroblasts derived from transgenic mice engineered to overexpress the normal enzyme can also be increased by a chaperone (col. 7, ll. 25-27). However, these experiments were done *ex vivo* using cells extracted from transgenic mice. This is not a method for gene therapy, since gene therapy depends on exogenous administration of a functional replacement gene (either directly or via administration of cells harboring the gene), and does not encompass increasing expression of a protein expressed from an endogenous gene, such as in a transgenic mouse. It is axiomatic that gene therapy is not contemplated in patients harboring an endogenous functional gene. (It is also clear that there are no transgenic people).

Similarly, Yew does not supply the missing motivation. In contrast to the '597 patent, Yew discloses treating Fabry disease by *in vivo* administration of a functional (i.e., non-mutant), replacement (i.e., non-endogenous)  $\alpha$ -galactosidase A gene. This is gene therapy. This is also precisely the treatment that the '597 patent teaches away from using, since, as indicated above, the

'597 patent teaches a method of rescuing endogenous  $\alpha$ -galactosidase A protein and does not suggest use in combination with gene therapy. Moreover, Yew does not teach or suggest any sort of combination therapy that would improve the disclosed gene therapy method, much less using an undisclosed treatment strategy, i.e., chaperone therapy.

Thus, one of ordinary skill in the art, in seeking to improve the efficacy of gene therapy by increasing expression of a functional protein expressed by an exogenous vector, would not have looked for guidance to a patent ('597) that is directed to rescuing an *endogenous* enzyme using a small molecule chaperone instead of gene therapy. While such a skilled artisan may have looked to patents that disclose gene therapy, such as Yew, for guidance on methods of improving gene therapy, Yew does not teach or suggest the claimed improvement of increasing expression of a recombinant protein from an expression vector using a chaperone. Therefore, one of ordinary skill in the art would not have been motivated to use a chaperone which was known to enhance the activity of an enzyme (the '597 patent), to increase expression of a enzyme from a vector, and thus improve gene therapy.

Regarding the rejection of claims 17 and 18 over the '597 patent, Yew, and Hendricks, Applicants submit that Hendricks does not supply the missing motivation to combine the references, let alone arrive at the claimed invention.

Hendricks discloses that administration to mice of mesenchymal cells expressing recombinant  $\alpha$ -galactosidase A from a retrovirus results in high levels of  $\alpha$ -galactosidase A. Thus, Hendricks merely describes "indirect" gene therapy and certainly does not teach or suggest improving the disclosed therapy by adding a chaperone for the  $\alpha$ -galactosidase A-expressing mesenchymal cells, as would be the requisite motivation to combine. Therefore, Hendricks is, at best, merely cumulative to Yew in disclosing a form of gene replacement, but there is still no motivation that would have led one of ordinary skill in the art to improve this method using a chaperone as presently claimed. As discussed above, neither Yew nor Hendricks disclose any such

treatment, and the '597 patent is concerned with a cheaper, alternative treatment to gene therapy, i.e., rescue of the endogenous protein.

Accordingly, withdrawal of this rejection is respectfully requested.

**Terminal Disclaimer to Obviate an Obviousness-Type Double Patenting Rejection**

In order to expedite prosecution, a terminal disclaimer was filed in the previous response, which disclaimed the term of any patent issuing from this application that would extend beyond the term of the '597, '964, '919, and '135 patents (all of which expire on the same date, and thus, have the same term).

Applicants would like to submit, for the record, that it is well-established that filing a terminal disclaimer does not constitute an admission or create estoppel that the claims of the patent over which the application is disclaimed render obvious the claims of the pending application. *Quad Environmental Technologies Corp. v. Union Sanitary District*, 946 F.2d 870, 20 USPQ2d 1392 (Fed. Cir. 1991).

*Quad* held that filing a terminal disclaimer in response to a PTO obviousness-type double patenting rejection of a second patent application in view of the first patent creates no "presumption or estoppel on the merits of the rejection." Specifically, the court stated that:

[A] terminal disclaimer is of circumscribed availability and effect. It is not an admission of obviousness of the later-filed *claimed* invention in light of the earlier-filed *disclosure*, for that is not the basis of a disclaimer....Voluntary limitation of the term of the later-issued patent is a convenient response to an obviousness-type double patenting rejection, when the statutory requirement of common ownership is met.

In view of the foregoing, the disclaimer over the '597 patent was merely to obviate the rejection, and in no way constitutes an admission that the '597 disclosure renders the present claims

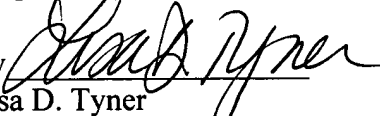
obvious. In addition, this disclaimer was made because the effective patent term of all of the foregoing patents will expire on the same day regardless of any terminal disclaimer, due to the provisions in the American Inventors Protection Act of 1999. Thus, there was no practical reason for not disclaiming the '597 patent in addition to the others.

Accordingly, withdrawal of this rejection is respectfully requested.

In view of the above remarks, it is believed the pending application is in condition for allowance.

Dated: June 8, 2006

Respectfully submitted,

By   
Lisa D. Tyner

Registration No.: 51,619  
Baker Botts, LLP

Attorneys/Agents For Applicant





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242011 J6 72 US3

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RECORDATION DATE: 09/07/2001

REEL/FRAME: 012158/0497  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

FAN, JIAN-QIANG

DOC DATE: 04/02/2001

ASSIGNOR:

ISHII, SATOSHI

DOC DATE: 03/20/2001

ASSIGNOR:

ASANO, NAOKI

DOC DATE: 03/28/2001

ASSIGNOR:

DESNICK, ROBERT J.

DOC DATE: 04/02/2001

ASSIGNEE:

MOUNT SINAI SCHOOL OF MEDICINE OF  
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NEW YORK, NEW YORK 10029

SERIAL NUMBER: 09948348

PATENT NUMBER:

FILING DATE: 09/07/2001

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012158/0497 PAGE 2

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/948,348	09/07/2001	Jian-Qiang Fan	2420/1J672US3	9914

TITLE OF INVENTION: METHOD FOR ENHANCING MUTANT ENZYME ACTIVITIES IN LYSOSOMAL STORAGE DISORDERS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	<del>NO</del> YES	\$1280 650	\$300	\$1580 \$950	02/20/2003
EXAMINER	ART UNIT	CLASS-SUBCLASS			
KHARE, DEVESH	1623	514-315000			

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MOUNT SINAI SCHOOL OF MEDICINE OF NEW YORK UNIVERSITY

NEW YORK, NEW YORK

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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/927,285 ✓	08/10/2001	3763	395	2420/1J672US2 ✓	13	9	4

CONFIRMATION NO. 6863

## FILING RECEIPT



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## Applicant(s)

Jian-Qiang Fan, Chiba, JAPAN;  
Satoshi Ishii, Oita, JAPAN;

## Assignment For Published Patent Application

Mount Sinai School of Medicine;

## Domestic Priority data as claimed by applicant

THIS APPLICATION IS A CON OF 09/087,804 06/01/1998 PAT 6,274,597

## Foreign Applications

If Required, Foreign Filing License Granted 09/05/2001

Projected Publication Date: 12/13/2001

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

## Title

Method of enhancing lysosomal alpha-galactosidase A ✓

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Preliminary Class

604

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RECORDATION DATE: 09/05/2001

REEL/FRAME: 012194/0182  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

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DOC DATE: 04/02/2001

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DOC DATE: 03/20/2001

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DOC DATE: 03/28/2001

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DESNICK, ROBERT J.

DOC DATE: 04/02/2001

ASSIGNEE:

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SERIAL NUMBER: 09604053  
PATENT NUMBER:

FILING DATE: 06/26/2000  
ISSUE DATE:

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,285	08/10/2001	Jian-Qiang Fan	2420/1J672US2	6863

TITLE OF INVENTION: METHOD OF ENHANCING LYSOSOMAL ALPHA-GALACTOSIDASE A

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	<del>NO</del> <b>yes</b>	\$1330	\$300	<del>\$1630</del> <b>\$1630.00</b>	03/31/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
HENRY, MICHAEL C	1623	514-315000

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(B) RESIDENCE: (CITY and STATE OR COUNTRY)

**Mount Sinai School of Medicine of New York University** **New York, New York**

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(Authorized Signature)

(Date)

**S. Peter Ludwig Reg. No. 25 351** **3/8/04**

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UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	DRAWINGS	TOT CLAIMS	IND CLAIMS
10/172,604	06/14/2002	1623	415	4168/1J672US4	13	25	3

CONFIRMATION NO. 4510

DARBY & DARBY P.C.  
Post Office Box 5257  
New York, NY 10150-5257

## FILING RECEIPT



\*OC000000008437127\*

Date Mailed: 07/11/2002

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

### Applicant(s)

Jian-Qiang Fan, New York, NY;  
Satoshi Ishii, Oita, JAPAN;  
Naoki Asano, Ishikawa, JAPAN;  
Robert J. Desnick, New York, NY;

### Assignment For Published Patent Application

Mount Sinai School of Medicine;

### Domestic Priority data as claimed by applicant

THIS APPLICATION IS A CON OF 09/948,348 09/07/2001  
WHICH IS A CON OF 09/604,053 06/26/2000  
WHICH IS A CIP OF 09/087,804 06/01/1998 PAT 6,274,597

### Foreign Applications

If Required, Foreign Filing License Granted 07/11/2002

Projected Publication Date: 10/17/2002

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

Computer sp  
O&D Entry sp  
Looseleaf sp  
Folder sp  
Card sp  
Letter sp  
Foreign Flg. sp

**Title**

Method for enhancing mutant enzyme activities in lysosomal storage disorders

**Preliminary Class**

514

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(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/172,604	06/14/2002	Jian-Qiang Fan	4168/1J672US4	4510

TITLE OF INVENTION: METHOD FOR ENHANCING MUTANT ENZYME ACTIVITIES IN LYSOSOMAL STORAGE DISORDERS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$650	\$300	\$950	04/14/2003

EXAMINER	ART UNIT	CLASS-SUBCLASS
KHARE, DEVESH	1623	514-315000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
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2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

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(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

MOUNT SINAI SCHOOL OF MEDICINE OF NEW YORK UNIVERSITY NEW YORK, NEW YORK

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☒ corporation or other private group entity ☐ government

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(Authorized Signature) Stephanie R. Amoroso 2/20/03  
 (Date)

Stephanie R. Amoroso Reg. No. 51,401

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Signature D. Davis

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## **Application Data Sheet**

### **Application Information**

Application Type::	Regular
Subject Matter::	Utility
Suggested Group Art Unit::	N/A
CD-ROM or CD-R?::	None
Sequence submission?::	None
Computer Readable Form (CRF)?::	No
Title::	COMBINATION THERAPY FOR TREATING PROTEIN DEFICIENCIES
Attorney Docket Number::	04168/100M413-US1
Request for Early Publication?::	No
Request for Non-Publication?::	No
Small Entity?::	Yes
Petition included?::	No
Secrecy Order in Parent Appl.?::	No

### **Applicant Information**

Applicant Authority Type::	Inventor
Primary Citizenship Country::	China
Status::	Full Capacity
Given Name::	Jian-Qiang
Family Name::	Fan
City of Residence::	Demarest
State or Province of Residence::	NJ
Country of Residence::	US
Street of mailing address::	34 Edward Street
City of mailing address::	Demarest
State or Province of mailing address::	NJ
Postal or Zip Code of mailing address::	07627

**Correspondence Information**

Correspondence Customer Number:: 07278

**Representative Information**

Representative Customer Number:: 07278

**Domestic Priority Information**

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	An application claiming the benefit under 35 USC 119(e)	60/448,073	02/18/03

**Assignee Information**

Assignee name:: Mount Sinai School of Medicine of New York  
University  
Street of mailing address:: One Gustave L. Levy Place  
City of mailing address:: New York  
State or Province of mailing address:: NY  
Postal or Zip Code of mailing address:: 10029



CORRECTED  
NOTICE

UNITED STATES PATENT AND TRADEMARK OFFICE

100M413-US1

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

FEBRUARY 03, 2005

PTAS

DARBY & DARBY P.C.  
PAUL F. FEHLNER, PH.D.  
P.O. BOX 5257  
NEW YORK, NY 10150-5257

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RECORDATION DATE: 06/29/2004

REEL/FRAME: 015535/0961  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).  
DOCKET NUMBER: 04168/100M413-US1

ASSIGNOR:

FAN, JIAN-QIANG

DOC DATE: 06/23/2004

ASSIGNEE:

MOUNT SINAI SCHOOL OF MEDICINE OF  
NEW YORK UNIVERSITY  
ONE GUSTAVE L. LEVY PLACE  
NEW YORK, NEW YORK 10029

SERIAL NUMBER: 10781356

FILING DATE: 02/17/2004

PATENT NUMBER:

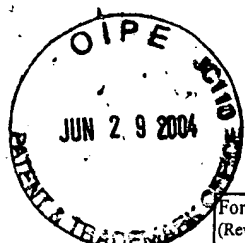
ISSUE DATE:

TITLE: COMBINATION THERAPY FOR TREATING PROTEIN DEFICIENCIES

100M413-US1

015535/0961 PAGE 2

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ASSIGNMENT DIVISION  
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Form PTO-1595  
(Rev. 03/01)  
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Jian-Qiang Fan

Additional name(s) of conveying party(ies) attached?

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3. Nature of Conveyance:

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☐ Other

Execution Date: June 23, 2004

2. Name and address of receiving party(ies)

Name: Mount Sinai School of Medicine of New York University

Internal Address:

Street Address:

One Gustave L. Levy Place

City: New York

State: NY Zip: 10029

Additional name(s) & address(es) attached: ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the new application is:

A. Patent Application No.(s):

10/781,356

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Paul F. Fehlner, Ph.D.  
DARBY & DARBY P.C.

Internal Address: Atty. Dkt.: 04168/100M413-US1

Street Address:

P.O. Box 5257

City:  
New York

State: NY Zip: 10150-5257

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41) \$ 40.00

☒ Enclosed

☐ Authorized to be charged to deposit account

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04-0100

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Stephanie R. Amoroso, Ph.D. - 51,401

Name of Person Signing

Signature

June 29, 2004

Date

Total number of pages including cover sheet, attachments, and documents: 3

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**ASSIGNMENT**

I, Jian-Qiang Fan, a citizen of China, residing at 43 Edward Street; Demarest, New Jersey 07627;

and each of us, if more than one person is identified above (hereinafter "ASSIGNOR") in consideration of the sum of Ten Dollars (\$10.00), or the equivalent thereof, and other good and valuable consideration, the sufficiency of which and receipt of which are hereby acknowledged, paid to ASSIGNOR by

Mount Sinai School of Medicine of New York University

a organized under the laws of New York, located at One Gustave L. Levy Place, New York, New York 10029 (hereinafter "ASSIGNEE"), do hereby sell and assign to said ASSIGNEE, its successors and assigns, the below indicated right, title, and interest, **throughout the world** in and to my Invention entitled:

**COMBINATION THERAPY FOR TREATING PROTEIN DEFICIENCIES  
U.S. Patent Application Serial No. 10/781,356  
Filed: February 17, 2004**

invented by me and described in the specification bearing the above Attorney Docket No. and title executed by me concurrently herewith; and all patents, divisions, reissues, continuations and any extensions thereof and rights of priority therein, said interest being my entire ownership interest in the same, to be held and enjoyed by said ASSIGNEE, its successors, assigns, or other legal representatives, to the full end of the term thereof, as fully and entirely as the same would have been held and enjoyed by me if this assignment and sale had not be made;

And for the consideration aforesaid, I hereby covenant and agree to and with said ASSIGNEE, its successors and assigns, that whenever ASSIGNEE, its counsel or representative, or the counsel or representative of its successors or assigns, shall advise that an amendment to, or a division of, or any other proceeding or action in connection with an application concerning said Invention, including interference proceedings, is lawful and desirable, or that a reissue or continuation or extension of such application or patent issuing therefrom is lawful and desirable, I will sign all papers and drawings, take all rightful oaths and

affidavits, and do all acts necessary or required to be done for the procurement of all lawful rights associated with the Invention, or for the reissue or continuation or extension of the same, will do all acts necessary or required to secure in said ASSIGNEE, its successors or assigns, the title to and full benefit of all rights hereby assigned, without charge to said ASSIGNEE or its successors or assigns, but at its or their expense; and I hereby appoint every present or future officer of said ASSIGNEE as my agent to sign all such papers and to do all such necessary acts on my behalf, to the fullest extent permitted by law;

And I hereby authorize and request the Commission of Patents and Trademarks and any other granting authority to issue any Letters Patent resulting from said Invention and application(s) concerning same to said ASSIGNEE.

This assignment shall have an effective date corresponding to the last date of execution.

I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that I have signed this document as my own free act and that all of the foregoing is true and correct.

Dated: \_\_\_\_\_

6/23/04

  
Jian-Qiang Fan, Inventor

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**MOUNT SINAI SCHOOL OF MEDICINE  
AFFIDAVIT AND ACKNOWLEDGMENT OF POLICIES**

NAME (print) Lian-Giang Fan  
 SIGNATURE [Signature] DATE 11/24/98

**AFFIDAVIT FOR ALL FACULTY**

I authorize Mount Sinai to consult with individuals at other institutions with which I have been associated, and with any others who may have information concerning my competence, character and ethical qualifications. I also authorize Mount Sinai to inspect any and all records and documents which may be material to this application. I authorize Mount Sinai to conduct any and all verifications as permitted by federal, state and municipal codes and regulations. I agree to abide by all Mount Sinai rules and regulations. I agree to follow Mount Sinai policies with respect to a drug-free workplace and I affirm that I do not use unprescribed controlled substances and/or any illegal substances. I have received and read the Mount Sinai Code of Ethics and Business Conduct.

I acknowledge that I have received and read the following information:

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- I will promptly report all inventions within the scope of the Patent and Development Policy to the Dean;
- If requested by Mount Sinai, I will assign such inventions to Mount Sinai and will execute such documents including patent applications and related papers as may be deemed necessary by Mount Sinai to transfer and secure to Mount Sinai the rights to such invention and to any patent issued or to be issued thereon.

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For all faculty members holding the titles of Professor, Associate Professor and Assistant Professor, Please sign and return to Internal Audit, Box 1092

**PHYSICIAN ALLOCATION AGREEMENT**

For physicians salaried by the Hospital, please sign and return to the Reimbursement Department, Financial Division, Box 4500.

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The New York State Education Law requires citizens of the United States who are faculty members of educational institutions to take an oath to support the Federal and State Constitutions. The oath, which Mount Sinai faculty are asked to sign as a condition for appointment, is as follow:

"I do hereby pledge or affirm and declare that I will support the Constitution of the United States of America and the Constitution of the State of New York, and that I will faithfully discharge my duties as a member of the faculty of The Mount Sinai School of Medicine of the City University of New York according to the best of my ability."

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 5/29/97

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